



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/587,424

09/27/2006

Fan Lu

55340-311395

8168

23342 7590 03/17/2009
KILPATRICK STOCKTON LLP
1001 WEST FOURTH STREET
WINSTON-SALEM, NC 27101

EXAMINER

GOUGH, TIFFANY MAUREEN

ART UNIT

PAPER NUMBER

1657

MAIL DATE

DELIVERY MODE

03/17/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/587,424 | LU ET AL. | |
| | Examiner | Art Unit | |
| | TIFFANY M. GOUGH | 1657 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-21, 41-46 and 51-66 is/are pending in the application.
- 4a) Of the above claim(s) 6-21, 45, 46 and 54-66 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 41-44 and 51-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/31/08, 12/31/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of claims 41-44 in the reply filed on 1/14/2009 is acknowledged. The traversal is on the ground(s) that all of the inventions share a special technical feature. This is not found persuasive because the special technical feature among the groups is a culture of *Nostoc* which is known in the art.

The requirement is still deemed proper and is therefore made FINAL.

Claims 6-21, 41-46, 51-66 are pending.

Newly submitted claims 54-66 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: they lack they same of corresponding technical feature because cultures of cyanobacterium belonging to the genus *Nostoc* are known in the art.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits.

Accordingly, claims 6-21, 51-66 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claims 41-44, 51-53 have been considered on the merits.

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 41, 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Hori et al. (Plant Foods for Human Nutrition, 1994).

Applicant claims a food product comprising colonies of *Nostoc*.

Hori teach soup and salad comprising *Nostoc commune*, i.e. a food product comprising *Nostoc commune* (Introduction, p. 63). Hori also teach benefits of using *Nostoc commune* in food. They teach that *N. commune* is high in dietary fiber, has cholesterol lowering effects, prevents the increase of serum cholesterol (p. 67,

Art Unit: 1657

discussion section and therefore has significant hypocholesterolemic effects (p.66 3rd full paragraph).

Thus, the reference anticipates the claimed subject matter.

Claims 41,51-53 are rejected under 35 U.S.C. 102(b) as being anticipated by Qiu et al. (J. of Applied Phycology, 2002).

Applicant claims a food product comprising colonies of *Nostoc*.

Qiu teach *Nostoc* (Ge-Xian-Mi) in a food product (p. 424, 2nd column) as well as colonies of size greater than 0.1 mm and about 10 mm (p.424, Geographical distribution and habitats section). They further teach that edible *N. commune* is of the same morphology and habitats as Ge-Xian-Mi (p. 427, Taxonomic identity of Ge-Xian-Mi)

Thus, the reference anticipates the claimed subject matter.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 41-44,51-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Hori et al. (Plant Foods for Human Nutrition, 1994) in view of Li et al. (Euro. J. Phycology, 2004).

Applicant claims a food product comprising colonies of *Nostoc*.

Hori teach soup and salad comprising *Nostoc commune* , i.e. a food product comprising *Nostoc commune* (Introduction, p. 63). Hori also teach benefits of using *Nostoc commune* in food. They teach that *N. commune* is high in dietary fiber, has cholesterol lowering effects, prevents the increase of serum cholesterol (p. 67, discussion section and therefore has significant hypocholesterolemic effects (p.66 3rd full paragraph).

Hori does not teach the claimed colony size.

Art Unit: 1657

Li et al. (Euro. J. Phycology, 2004) teach *Nostoc sphaeroides* (also known as *N. commune*) to be an edible cyanobacterium which grows to colony sizes ranging from greater than 0.1mm to about 10mm (see introduction, materials and methods section, Table 1).

None of the above references teach the claimed amounts of *Nostoc* added to a food product.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add any desired amount of *Nostoc* to a food product and such amount would not lend patentability. Adjusting such a result effective variable as an amount added to food is practiced as routine optimization in this art.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIFFANY M. GOUGH whose telephone number is (571)272-0697. The examiner can normally be reached on M-F 8-5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jon Weber can be reached on 571-272-0925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1657

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ralph Gitomer/
Primary Examiner, Art Unit 1657

/Tiffany M Gough/
Examiner, Art Unit 1657